REMARKS

In the Action, claims 1, 2 and 4-6 are rejected, and claims 3 and 7-10 are withdrawn from consideration as being directed to the non-elected invention. In response, claims 7-10 are cancelled, and claims 1, 3 and 6 are amended. New claims 11-19 are added to recite additional features of the invention. The pending claims in this application are claims 1-6 and 11-19, with claim 1 being the sole independent claim.

Claim 1 is amended to recite that the water-absorbent resin being produced is from a classification step and/or a surface-modifying step following the polymerization and drying steps. Claim 1 is further amended to recite that the water-absorbent resin has a mass-average particle diameter of 200 to 700 μm determined according to JIS-standardized sieves after the classification and contains particles of not smaller than 1,000 μm in the range of less than 5.0 mass %. Claim 1 recites that the water-absorbent resin (a) separated from the water-absorbent resin being produced is mixed with the continuously produced water-absorbent resin. Support for the polymerization step and the drying step are found on page 8, line 1 to page 15, line 12 of the specification. The average particle diameter of the water-absorbent resin is supported on page 16, lines 15-18. The amount of the coarse particle having a particle size of not less than 1,000 μm is found on page 16, line 24 to page 17, line 3. Accordingly, these amendments are supported by the specification as originally filed.

Claim 3 is amended to be dependent from claim 1 and to further recite the step of adjusting the production of the water-absorbent resin based on the measurement of the water-absorbent resin in step (A). Accordingly, claim 3 should be rejoined with the elected claims. Claim 6 is amended to recite that the water-absorbent resin has a mass-average particle diameter of 300 to 600 μm and having particles of 850 to 150 μm in an amount of 95 to 100

mass % as measured by a laser diffraction scattering method. Support for this amendment is found on page 30, lines 7-26.

New claims 11-19 are added to depend from claim 1 and to recite additional features of the invention that are not disclosed or suggested in the art of record. Claim 11 is added to recite the particle size of the water-absorbent resin as disclosed on page 16, line 19 to page 17, line 3. Claim 12 recites the step of mixing in the step (C) being carried out in a dry manner as disclosed on page 39, lines 1-4 and page 40, lines 6-7. Claim 13 recites the yield of the water-absorbent resin as disclosed on page 40, lines 17-21. Claim 14 recites the water-absorbent resin containing a carboxyl group and where the surface-modifying step is carried out by dehydration-reactable crosslinking agents as disclosed on the last line of page 17 to page 18, line 19.

Claim 15 is added and recites that at least a portion of the water-absorbent resin (a) separated in step (B) is mixed in step (C) without being further modified as disclosed on page 39, lines 1-4. The term "modification" means a change of the properties of the water-absorbent resin, such as pulverization, granulation, and surface-crosslinking. Claim 16 recites the amount of the water-absorbent resin (a) separated in the step (B) and mixed in the water-absorbent resin is not larger than 10 mass % as disclosed on page 39, line 24 to page 40, line 5. Claim 17 recites the amount of the water-absorbent resin (a) separated from step (B) being 20 to 0.001 mass % as disclosed on page 32, line 18 to page 33, line 2. Claim 18 depend from claim 1 and recites the resulting water-absorbent resin defined by the mass-average particle diameter, the residual monomer content, the absorption capacity without load, the absorption capacity under load, and the amount of fine powder as in original claim 9 and as disclosed on page 41, lines 10-21, and page 42, line 16 to page 43, line 11. Claim 19

recites the laser diffraction method being carried out in a dry measurement as disclosed on page 29, line 12 to page 30, line 7.

In view of the above, the amendments and the new claims are supported by the specification as originally filed.

Rejection of Claims 1, 2 and 4-6

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by EP 885 917. EP '917 is cited for disclosing a classification process where a portion of the fine particles separated from the water-absorbent resin are recycled.

The present invention is directed to a process including the step of measuring a predetermined property or component content of the flow of a water-absorbent resin product in step (A). The water-absorbent resin of step (A) is continuously produced from a classification step and/or a surface-modifying step following polymerization and drying where the water-absorbent resin has a specified mass-average particle diameter. EP '917 does not disclose a water-absorbent resin from a classification and/or surface-modifying step having the claimed mass-average particle diameter and does not measure a predetermined property and/or component content after the classification and/or surface-modifying step.

The claimed invention also includes a step (B) which separates a portion of the water-absorbent resin (a) which does not satisfy the specific property and/or component content. At least a portion of the separated water-absorbent resin (a) is then mixed to the production line in step (C). In the present invention, the water-absorbent resin product having the desired properties can be continuously produced with a consistent and uniform quality. In this manner, variations in the properties of the continuously produced water-absorbent resin are minimized.

As amended, claim 1 recites the particle diameter, the classification step and surface-modifying step being carried out after the polymerization step and the separated water-absorbent resin (a) being mixed in the production line in step (C). Accordingly, claim 1 and the claims dependent therefrom are not anticipated by EP '917.

EP '917 is directed to a process for producing a water-absorbent resin composition that contains granules obtained from fine particles. EP '917 does not disclose separate steps of measuring a predetermined property and/or component content after the classification step and/or modifying step as in step (A) of the claimed invention. EP '917 also fails to disclose a separate step of separating a predetermined amount of a water-absorbent resin (a) and then mixing the water-absorbent resin (a) into the water-absorbent resin that comes directly from the classification step and/or surface modifying step where the water-absorbent resin (a) is without further modification.

The Action suggests that the classifying step of EP '917 to remove coarse particles, objective particles and fine particles corresponds to the claimed steps (A) and (B). However, the classification step of EP '917 is a simple classification where the coarse particles and the fine particles are removed from the water-absorbent resin stream. The coarse particles removed from the water-absorbent resin in EP '917 is returned to the pulverization step. The coarse particles are not returned to the water-absorbent resin stream obtained from the classification step and/or surface-modifying step as claimed.

The fine particles from the classification step in EP '917 are mixed with an aqueous liquid and granulated to form larger particles. Thus, the fine particles of EP '917 are not recycled without further modification as claimed. Furthermore, the granulated water-absorbent resin in EP '917 is directed to the drier to remove the liquid added during the granulation step. See Figure 7 of EP '971. Thus, the granulated water-absorbent resin is not

mixed with the water-absorbent resin from the classification step and/or surface-modifying step.

The claimed steps (A), (B) and (C) of claim 1 are not a simple classification step because the steps (A), (B) and (C) are recited separately from the classification step. Thus, the claimed steps (A), (B) and (C) are different from the classification step of EP '917. Page 16 of EP '917 discloses the conventional classification step but does not disclose or suggest the claimed steps (A), (B) and (C).

Even if the general classification step described on page 16 of EP '917 is considered the same as the claimed step (A), then there is no classification step in the invention of EP '917 corresponding to the claimed classification and/or surface-modifying steps from which the predetermined property and/or component content are measured as in claim 1. The coarse particles of EP '917 are re-pulverized and then re-classified. As noted above, the fine particles are granulated by combining with an aqueous liquid. Thus, the mixing of the water-absorbent resin (a) without further modification as in claim 1 is not disclosed or suggested in EP '917.

In view of the above, claim 1 is not anticipated by or obvious over EP '917. Claims 2, 3, 4 and 5 depend from claim 1 and are also allowable as depending from an allowable base claim. In particular, EP '917 does not disclose the mixing of the water-absorbent resin (a) being carried out in the production line of claim 2, changing the production conditions in response to the results of the measurement of step (A) as in claim 3, measuring the predetermined property and/or component content from the surface-modifying step as in claim 4, or measuring the absorption capacity without load, absorption capacity under load, liquid permeability and particle diameter of claim 5 in combination with the features of claim 1.

In view of the above, claims 1-5 are not anticipated by EP '917.

Claim 6 is rejected under 35 U.S.C. § 103(a) as being obvious over EP '917, and further in view of U.S. Patent No. 5,468,813 to Uenaka et al. or U.S. Patent No. 6,107,385 to Imahashi. Uenaka et al. and Imahashi are cited for disclosing measuring particle diameters by laser diffraction scattering. The rejection is based on the position that it would be obvious to measure the particle diameters of EP '917 using a laser diffraction scattering method.

EP '917 relates to a classification process where the water-absorbent resin is passed through a sieve. EP '917 does not measure the particle diameter of the water-absorbent resin. Thus, Uenaka et al. and Imahashi provide no motivation or incentive to one of ordinary skill in the art to measure the particle diameter of the water-absorbent resin of EP '917. Accordingly, it is not obvious to measure the particle diameter by a laser diffraction scattering method in view of the combination of the cited patents.

Furthermore, the particle diameter of Uenaka et al. and Imahashi is in the order of 0.3 to 7 μm and 0.4 to 2 μm, respectively. In contrast, claim 6 as amended recites measuring the water-absorbent resin having average particle diameter of 300 to 600 μm and having 95 to 100 mass % with a particle size of 850 to 150 μm. Thus, Uenaka et al. and Imahashi are unrelated to the granulation process of EP '917 and the process of the claimed invention. Accordingly, claim 6 is not obvious over the combination of the cited patents.

New claims 11-19 are also allowable over the art of record for reciting additional features of the invention that are not disclosed in the cited art. For example, the cited art does not disclose the particle size of claim 11, the mixing in step (C) being in a dry manner as in claim 12, the yield of the water-absorbent resin as in claim 13 where the water-absorbent resin containing a carboxyl group and the surface-modifying step being carried out in a

dehydration reactable crosslinking agent as in claim 14 in combination with the features of claim 1.

The art of record further fails to disclose that the water-absorbent resin (a) separated in the step (B) and mixed in the step (C) is without further modification as in claim 15, the amount of the water-absorbent resin (a) being separated in the step (B) is not larger than 10 mass % as in claims 16 and 17, or the recited values of the average particle diameter, residual monomer content, absorption capacity under load, absorption capacity without load and the amount of fine powder having a particle diameter less than 150 μm as in claim 18 in combination with the features of claim 1. The combination of the cited art further fails to disclose the laser diffraction scanning method being carried out in a dry measurement as in claim 19 in combination with the features of claims 6 and independent claim 1.

In view of these amendments and the above comments, reconsideration and allowance are requested.

Respectfully submitted,

Garrett V. Davis
Reg. No. 32,023

Roylance, Abrams, Berdo & Goodman, L.L.P.
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
(202) 659-9076

Dated: March 6, 2006